03050109-090

(Broad Mouth Creek)

General Description

Watershed 03050109-090 is located in Anderson and Abbeville Counties and consists primarily of ***Broad Mouth Creek*** and its tributaries. The watershed occupies 21,785 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Madison series. The erodibility of the soil (K) averages 0.26 and the slope of the terrain averages 15%, with a range of 2-40%. Land use/land cover in the watershed includes: 57.0% forested land, 35.3% agricultural land, 6.8% urban land, 0.4% water, 0.3% forested wetland (swamp), and 0.2% barren land.

Broad Mouth Creek flows past the City of Belton and accepts the drainage of Chinquola Mill Creek (Still Branch), near the Town of Honea Path, before draining into the Saluda River. This watershed contains a total of 48.2 stream miles and 53.3 acres of lake waters, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
S-289	S/W	FW	BROAD MOUTH CREEK AT S-04-267, BELOW BELTON MARSHALL PLANT
S-776	BIO	FW	TRIBUTARY TO BROAD MOUTH CREEK AT S-04-205
S-010	S/W	FW	BROAD MOUTH CREEK AT US 76
S-775	BIO	FW	BROAD MOUTH CREEK AT S-04-81
S-304	W/INT	FW	BROAD MOUTH CREEK AT S-01-111

Broad Mouth Creek – There are four SCDHEC monitoring sites along Broad Mouth Creek. At the furthest upstream site ***(S-289)***, aquatic life uses are fully supported. Prior to 2001, this was a secondary monitoring station and sampling was intentionally biased towards periods with potentially low dissolved oxygen concentrations. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration, and a significant increasing trend in dissolved oxygen concentration suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria.

Aquatic life uses are also fully supported further downstream ***(S-010)***; however, there is a significant increasing trend in turbidity. Prior to 2001, this was a secondary monitoring station and sampling was intentionally biased towards periods with potentially low dissolved oxygen concentrations. There is a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration and an increasing trend in dissolved oxygen concentration suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions.

At the next site downstream ***(S-775)***, aquatic life uses are fully supported based on macroinvertebrate community data. Aquatic life uses are again fully supported at the furthest downstream site ***(S-304)***, but recreational uses are partially supported due to fecal coliform bacteria excursions.

Unnamed tributary to Broad Mouth Creek (S-776) - Aquatic life uses are partially supported based on macroinvertebrate community data.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *COMMENT*
BROAD MOUTH CREEK TRANSMONTAIGNE/BELTON/PIEDMONT PIPE #: 001 FLOW: M/R	SC0002887 MINOR INDUSTRIAL
BROAD MOUTH CREEK TRANSMONTAIGNE/BELTON SE PIPE #: F01, S01 FLOW: M/R	SCG340013 MINOR INDUSTRIAL
BROAD MOUTH CREEK MARATHON ASHLAND/BELTON PIPE #: F01, S01 FLOW: M/R	SCG340014 MINOR INDUSTRIAL
BROAD MOUTH CREEK COLONIAL PIPELINE/BELTON PIPE #: 001, 002 FLOW: M/R	SCG340020 MINOR INDUSTRIAL
BROAD MOUTH CREEK INGERSOLL-RAND CO. PIPE #: 001 FLOW: 0.123	SC0047520 MINOR INDUSTRIAL
BROAD MOUTH CREEK BELTON INDUSTRIES INC. PIPE #: 001, 002 FLOW: M/R	SC0000698 MINOR INDUSTRIAL

Growth Potential

There is a low to moderate potential for growth in this watershed, which contains portions of the City of Belton and the Town of Honea Path. The corridor that runs along U.S. 76 from Honea Path to Belton, and on to the Town of Williamston will continue to be a growth area.

Watershed Protection and Restoration Strategies

Special Projects

Assessing Water Quality in the Saluda River Watershed

Furman University has recently completed a three-year project that was to determine the sources of impairments on several tributaries and reaches of the Saluda River. These impairments include high fecal coliform counts detected in the watersheds of the Middle Saluda River, the South Saluda River, a small tributary to the Saluda River north of the Town of Pelzer, **Broad Mouth Creek**, Big Brushy Creek, the Bush River, Scotts Creek, and the Little River; high phosphorous concentrations found in the Bush River; low dissolved oxygen levels in Coronaca Creek; and an impaired macroinvertebrate community in **Broad Mouth Creek**. A stream sampling program was conducted in 2001, 2002, and 2003 with 182

sites sampled within the ten impaired areas. Each site was sampled from 3 to 7 times for water chemistry and for total coliform, *E. coli*, and heterotrophic bacterial counts. In addition, selected sites were sampled for fish abundance and diversity and for macroinvertebrate abundance and diversity.